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PATENT
57139-5045

IN THE PATENT AND TRADEMARK OFFICE

In Re Patent Application Of: Yoshihide ITEYA Serial No.: 09/785,026 Filing Date: February 15, 2001 For: BICYCLE CONTROL DEVICE	Group Art Unit: 3682 Examiner: Julie K. Smith **CERTIFICATE OF EXPRESS MAILING** I hereby certify that this correspondence and identified enclosures are being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 and is addressed to: Mail Stop Appeal Brief, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on **October 7, 2004** Express Mail Label No. **EV272832423US** by Bobbie-Jean Corbin Bobbie-Jean Corbin

Mail Stop Appeal Brief
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Dear Sir/Madam:

Attached are the following:

1) Supplemental Appeal Brief (in triplicate);

2) Request to Reinstate Appeal; and

3) Return Postcard.

Respectfully submitted,

Date: 10/6/04

ROD S. BERMAN
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Yoshihide ITEYA Serial No.: 09/785,026 Filed: February 15, 2001 For: **BICYCLE CONTROL DEVICE**	Art Unit: 3682 Examiner: Julie K. Smith

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by Bobbie-Jean Corbin
Bobbie-Jean Corbin

REQUEST TO REINSTATE APPEAL PURSUANT TO 37 C.F.R. 1.193(B)

On March 19, 2004, Applicant filed a Notice of Appeal for this Application. Applicant's Appeal Brief was timely submitted on May 13, 2004. In an Office Action, dated July 22, 2004, the Examiner re-opened prosecution of this application, again rejecting all pending claims. Accordingly, pursuant to 37 C.F.R. 1.193(b)(2)(ii) Applicant hereby requests the reinstatement of its appeal and is enclosing three copies of its Supplemental Appeal Brief herewith.

It is believed that no fee is required for the reinstatement of Applicant's appeal or for the submission of its Supplemental Appeal Brief. See M.P.E.P. § 1208.02. However, if a fee is due, authorization is hereby given to charge any fee (or credit any balance) to the undersigned deposit account 10-0440.

Respectfully submitted,

JEFFER, MANGELS, BUTLER & MARMARO LLP

Dated: October 6, 2004

By: _____

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Yoshihide ITEYA Serial No.: 09/785,026 Filed: February 15, 2001 For: **BICYCLE CONTROL DEVICE**	Art Unit: 3682 Examiner: Julie K. Smith

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Commissioner for Patents
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by Bobbie-Jean Corbin
Bobbie-Jean Corbin

SUPPLEMENTAL APPEAL BRIEF

In response to the Office Action, dated July 22, 2004, Applicant submits this Supplemental Appeal Brief and requests reinstatement of its previously filed appeal. It is believed that no fee is due for filing this brief. However, if a fee is due, authorization is hereby given to charge any fee (or credit any balance) to the undersigned deposit account 10-0440.

This is an appeal from the decision dated July 22, 2004, rejecting claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Abe, U.S. Patent No. 6,073,730 ("Abe") in view of Miike, U.S. Patent No. 5,345,051 ("Miike"); rejecting claims 7 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Miike and further in view of Seimitsu, Japanese Patent Application JP 20026893 ("Seimitsu"); rejecting

claims 8 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Miike and further in view of Miyoshi et al., Japanese Patent Application JP 04048521 ("Miyoshi"); rejecting claims 12 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Miike and further in view of Hill et al., U.S. Patent No. 5,745,438 ("Hill"); and rejecting claims 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Abe in view of Miike and further in view of Iteya, U.S. Patent No. 6,331,089 ("Iteya") .

REAL PARTY IN INTEREST

The real party in interest is Shimano Inc., the assignee of the subject application.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Claim 2 has been canceled. Claims 1 and 3-27 remain pending and are the subject of this appeal.

STATUS OF AMENDMENTS

Claim 20 was amended following the final rejection, dated November 20, 2003. The amendment has been entered by the Examiner.

SUMMARY OF THE INVENTION

Modern bicycles frequently include a number of control devices that enable a rider to optimize his or her ride. Typical control devices include brake control devices, shift control devices, and combinations of the two. In addition, modern bicycles frequently include cycle computers that provide riders with information about their ride on computer screens. It is desirable to locate such computer screens directly in front of the rider, but locate the control device away from the computer, near the bicycle's handle grips. This minimizes the need for the rider to move his or her hands between the control device and the control switch, which can impair the ability to steer and control the bicycle. In addition to the foregoing, it is desirable to

provide a control switch assembly having a structure and configuration that allow for relatively simple and inexpensive installation. Thus, a need has arisen for a bicycle control switch which addresses these concerns (page 1, line 16-page 2, line18 and page 6, lines 1-8).

The present invention fulfills these needs. Without limiting the scope of the present invention in anyway, the independent claims on appeal are summarized as follows: Claim 1 is directed to a bicycle switch mounting assembly comprising a bicycle control device having a top surface that defines a recess in the device. The recess has a bottom wall and a side wall which are not printed circuit boards, and the side wall is connected to the bottom wall. The claimed mounting assembly further comprises an operation control button with an outer periphery having a shape. The operation control button is movable within the recess, and the recess has a shape which conforms to the shape of the outer periphery of the operation control button.

Independent claims 3 and 4 are directed to a bicycle switch mounting assembly for holding a computer control switch. Claim 3 recites a bicycle shift control device, and claim 4 recites a bicycle brake control device. The respective control devices comprise a top surface defining a recess that is dimensioned to receive an operation control button. The recess also has a shape conforming to the outer periphery of the operation control button, and the control button is movable within the recess.

Independent claim 5 is directed to a control device for holding a computer switch. The control device comprises an integrated brake and shift control device and an operation control button. A casing having a recess encompasses the brake and shift control devices. The recess is dimensioned to receive the computer control switch and has a shape conforming to the shape of the outer periphery of the operation control button. The operation control button is movable within the recess.

Independent claim 6 is directed to a bicycle switch assembly. The assembly comprises a bicycle control device having a casing that defines a switch mounting recess. A

control switch comprising an operation control button is mounted in the switch mounting recess, and the recess has a shape conforming to the shape of the outer periphery of the operation control button. The operation control button is movable within the recess.

Similarly, independent claim 13 is directed to a bicycle control assembly for holding a control switch for a computer. The control switch has an operation control button. The assembly comprises a control device having a casing that defines a switch mounting recess. The recess is dimensioned to receive the control switch and has a shape conforming to the shape of the outer periphery of the control button. The operation control button is movable within the recess.

Claim 18 is directed to a handlebar assembly controllable by the hand of a bicycle rider. The assembly comprises a handlebar having an end to which a hand grip is attached. A control device is attached to the handlebar proximal the hand grip such that the rider's hand can reach the device while remaining on the hand grip. The control device defines a switch mounting recess in which a control switch is mounted. A cycle computer is attached to the handlebar separately from the control device and is electrically connected to the control switch. The control switch comprises an operation control button, and the recess has a shape conforming to the outer periphery of the control button. The operation control button is movable within the recess.

A preferred embodiment of a control device as described by the above claims is shown in Figures 1a, 1b and 2 of the present application. According to the embodiment, a combined bicycle brake and shifting control device 20 is provided which contains a switch mounting recess 42 defined in a surface of the control device 20. See page 4, line 21-29; page 6, line 17-27. The recess 42 is dimensioned to receive a control switch 40 which is mounted in the recess 42. See Figures 3-7.

ISSUES

1. Is the subject matter of claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27 obvious under 35 U.S.C. § 103(a) over Abe in view of Miike?

2. Is the subject matter of claims 7 and 21 obvious under 35 U.S.C. § 103(a) over Abe in view of Miike and further in view of Seimitsu?

3. Is the subject matter of claims 8 and 22 obvious under 35 U.S.C. § 103(a) over Abe in view of Miike and further in view of Miyoshi?

4. Is the subject matter of claims 12 and 26 obvious under 35 U.S.C. § 103(a) over Abe in view of Miike and further in view of Hill?

5. Is the subject matter of claims 18 and 19 obvious under 35 U.S.C. § 103(a) over Abe in view of Miike and further in view of Iteya?

GROUPING OF THE CLAIMS

The grouping of the claims is as follows:

Claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27 (bicycle control device having a recess dimensioned to receive a control switch mounted in the recess);

Claims 7, 21 (control switch attached in recess by an adhesive);

Claims 8, 22 (control button with elastic attachment arm press-fitted into hole in recess);

Claims 12, 26 (retention ring threadingly engaged with recess);

Claims 18 and 19 (bicycle control device attached to handlebar proximate handgrip and having recess defined therein, wherein a control switch is mounted in the recess); and

The claims do not stand or fall together. Each of the foregoing groupings will be argued separately below. Nevertheless, Applicant is not conceding that the features of the dependent claims are necessary to support patentability. Instead, the claim groupings are being

separately argued in order to show that the claims include several features that alone or in combination distinguish the present invention from the prior art.

ARGUMENT

After receiving Applicant's original Appeal Brief, the Examiner re-opened prosecution of this application. However, she has again rejected all of the pending claims based on the same references which were previously asserted. No new references have been cited.

Again, the Examiner has not asserted that any references anticipate the claims. Instead, she has selectively extracted the claim features from numerous combinations of references. However, the combined references do not disclose the present invention, but instead, require selective combination and reconstruction to obtain it. This reconstruction is not motivated or suggested by any prior art teaching. "When prior art references require selective combination . . . to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself." Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051 (Fed. Cir. 1988). As a result, the obviousness rejections are improper and should be withdrawn.

I. The Subject Matter of Claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27 Is Not Obvious Under 35 U.S.C. § 103(a) Over Abe In View of Miike

The Examiner asserts that claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27[1] are obvious over the combination of Abe and Miike. However, the combined references fail to teach the limitations of the rejected claims. In addition, the Examiner has not identified any motivation

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[1] Applicant has grouped Claim 1 with the other claims that were rejected solely based on the combination of Miike and Abe. In view of 37 C.F.R. 1.192(7), Applicant is presenting its arguments for this group based on the language of Claim 1. However, the claims in this group are not all identically worded. Thus, in framing its arguments to comply with Rule 192, Applicant does not concede that each claim in this group should be construed identically with one on another or that any of the claims in other designated groups should be construed identically with one another.

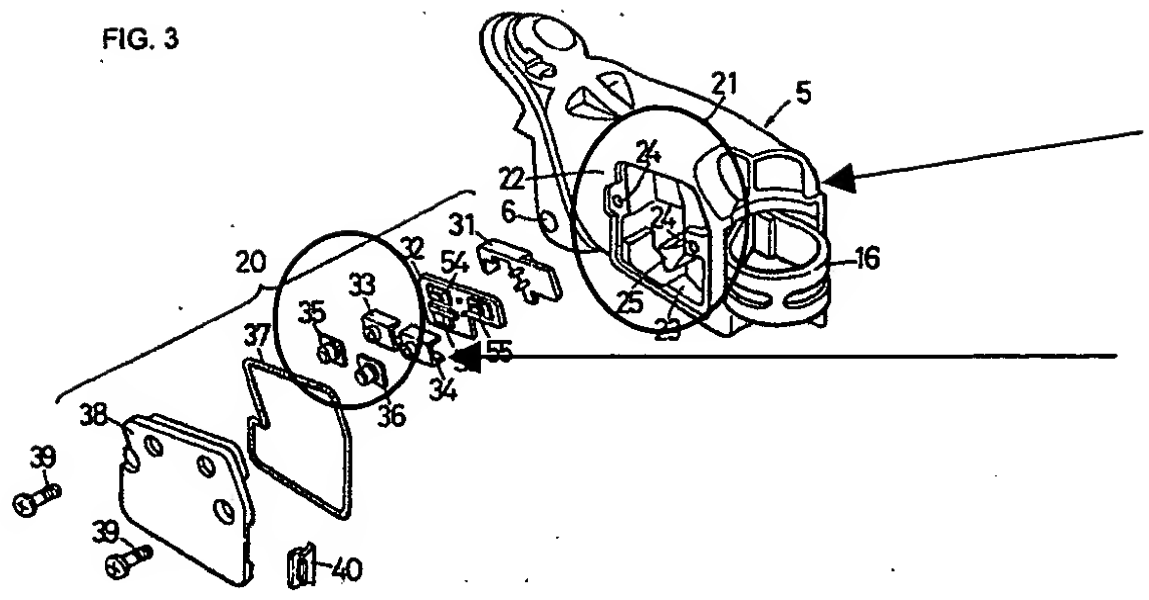
or suggestion in the prior art for combining Abe and Miike or modifying them in the manner necessary to obtain the claimed invention.

A. Abe and Miike Do Not Teach Or Suggest The Claimed Invention

Claim 1 is directed to a bicycle switch mounting assembly for holding a computer control switch. It recites a bicycle control device having a top surface that defines a recess in the device. It further recites an operation control button that is movable within the recess. The recess has a shape that conforms to the outer periphery of the operation control button and also has side and bottom walls that are not printed circuit boards. The side wall is connected to the bottom wall. The rejected claims in this group recite a structural relationship between a bicycle control device and a control button or switch which is neither suggested nor disclosed by Abe or Miike--either alone or in combination. Thus, the combined references cannot render them obvious. See Litton Systems, Inc. v. Honeywell, Inc., 87 F.3d 1559, 1569 (Fed. Cir. 1996) (rejecting defendants' obviousness challenge on the grounds that "[t]he prior art simply does not contain many limitations in the claimed method").

Neither Abe nor Miike teaches or suggests a switch configuration in which an operation control button is movable within a recess that is defined in the top surface of a bicycle control device and which is shaped to conform to the outer periphery of the control button. Abe discloses a control button configuration that is distinctly different than the claimed invention. Abe's two push buttons 35 and 36 are located within a single switch unit mounting recess 23. The switch unit mounting recess is "a deformed rectangle," Abe at 3:42, as shown in Abe Figure 3:

FIG. 3



Abe Fig. 3

Abe's switch unit mounting recess 23 is a "deformed rectangle"

Push buttons 35 and 36 are part of the switch unit.

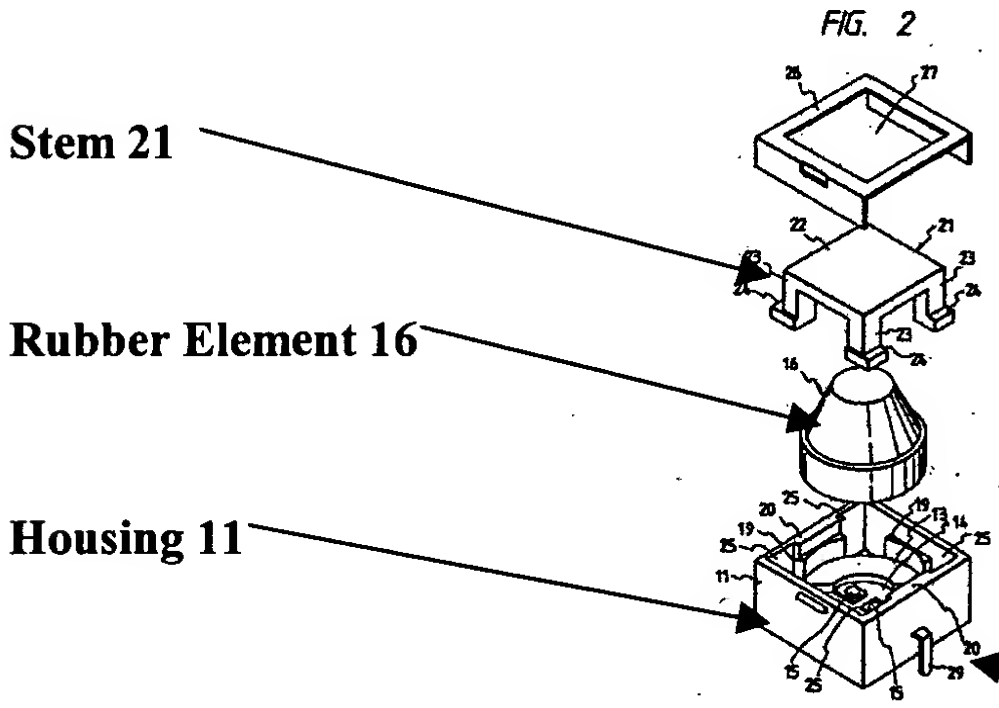
As the figure clearly indicates, recess 23 does not conform to the shape of either of the push buttons 35 or 36, but instead, is substantially larger than both buttons. Thus, Abe does not disclose a recess having shape conforming to the outer shape of a control button and is distinctly different from Applicant's claimed configuration of control device, recess, and control button.

Notwithstanding the foregoing, the Examiner asserts that Abe's "recess has a shape conforming to the outer periphery of the operation control button (20)." July 22, 2004 Office Action at 3. To support her rejection of Applicant's claims, the Examiner has creatively characterized Abe's entire switch unit 20 as an "operation control button." However, Abe's "switch unit 20 comprises a switch bottom case 31, the printed circuit board 32, push button guide members 33 and 34, push buttons 35 and 36, a seal 37, the switch top cover 38, the small screws 39 and other components." Abe at 3:50-53. Thus, the Examiner's characterization of the switch unit as an operation control button is contrary to the reference itself which clearly states that the only buttons in the switch unit are push buttons 35 and 36.

Nevertheless, the Examiner's attempt to re-characterize Abe's device is unavailing. Claim 1 recites that "the operation control button is movable within the recess." If as the Examiner states, Abe's switch unit 20 is characterized as an "operation control button," then unlike the claimed invention, Abe's "operation control button" would not be movable within

Abe's recess 23. Abe specifically provides that "[t]he switch top cover 38 is then secured by screwing the small screws 39 into the thread holes 24 to fix the switch unit 20 to the lever bracket 5." Abe at 6:27-29. Because the top cover 38 is screwed into the lever bracket 5, Abe's switch unit 20 is not movable within the recess 23. Therefore, even as characterized by the Examiner, Abe's structure is distinctly different from and does not suggest the claimed invention.

Miike is similarly deficient. Miike discloses a self-contained push button switch apparatus, but does not disclose any applications for the switch, let alone those involving bicycles or bicycle control devices. Figure 2 from Miike shows the structure of the self-contained switch apparatus:



Miike Fig. 2

Miike discloses a self-contained switch having an insulating case or housing 11 in which a rubber element 16 having a movable contact 17 (not shown) is deformed to engage contacts 15 by depressing stem 21.

Terminals 29 are provided to connect the entire switch assembly to another device

The Examiner has not identified the alleged correspondence between Miike's switch and the claim elements. The purpose of Miike's design is to provide a self-contained switch assembly which can be connected to another device. To allow for such a connection, it includes "a pair of terminals 29 [which] extend downwardly from the fixed contacts 15 through the inner bottom face 12 of the insulating case 11 in order to allow external connection of the push-button switch." Miike at 3:65-68 (emphasis added). Thus, Miike does not teach or suggest creating a recess in the top surface of a control device to accommodate a switch. Instead, the

insulating case 11 is intended to be externally attached to a control device. Moreover, Miike does not suggest that its switch structure is superior to or should be used to replace the push button/printed circuit board configuration of Abe's device. Instead, it merely purports to provide a better type of self-contained switch than was previously known in the art. See Miike at 1:47-64 and Fig. 6.

Abe and Miike cannot be combined to obtain the claimed invention. Instead, the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [Abe] as well as a change in the basic principles under which the [Abe] construction was designed to operate." Application of Ratti, 270 F.2d 810, 813 (C.C.P.A. 1959). As a result, combining the references to reject the claims as obvious is improper. Id.

The Examiner has not specifically indicated how she proposes to combine Abe and Miike to obtain the claimed invention. For example, she may contend that it would be obvious to redesign Abe's recess 23 to accommodate Miike's stem 21 and rubber element 16. However, Miike's insulating case 11 would have to be discarded, notwithstanding Miike's teaching that the entire switch is intended to be used as a self-contained unit. Thus, Miike's principle of operation would be changed.

Further, Abe's entire switch unit 20 would have to be discarded, and the interior of the recess 23 would have to be re-configured to accommodate the legs 23 and protruded portions 24 of Miike's stem. In addition, electrical contacts would have to be added to Abe's recess 23 to make contact with movable contact 17 on the underside of Miike's rubber element 16. The required re-design would eliminate one of Abe's two push buttons 35 and 36 as well. In order to preserve Abe's two switch configuration, another recess would have to be defined in the top surface of Abe's control device. Furthermore, Abe connects its position sensor 9 to a female connector 56 on its printed circuit board 32, and connects a display to female connector 53 on the circuit board. Abe at 3:17-26. In order to preserve Abe's mode of operation, a new means of

making these connections would be required in light of the fact that the printed circuit board would have to be discarded. [2] The Examiner gives no indication as to how this would be done.

Based on the foregoing, Abe and Miike cannot be combined to obtain the claimed invention, but instead would require extensive alteration. Thus, they cannot properly be combined to render the claimed invention obvious.

B. The Examiner Has Failed to Provide a Motivation or Suggestion in the Prior Art for Combining and Modifying Abe and Miike

Even if Abe and Miike could be combined to obtain the claimed invention, the Examiner has not established that one of ordinary skill in the art would have combined them. "When an obviousness determination is based on multiple prior art references, there must be a showing of some teaching, suggestion, or reason to combine the references." Winner International Royalty Corp. v. Wang, 202 F.3d 1340, 1348 (Fed. Cir. 2000) (citations omitted). See also In re Stencel, 828 F.2d 751, 755 (Fed. Cir. 1987)("Nor is obviousness established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion that the combination be made"). The Examiner has failed to identify a motivation or suggestion for combining Abe and Miike. "The absence of such a suggestion [to combine] is dispositive in an obviousness determination." Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579 (Fed. Cir. 1997).

Instead of identifying a prior art suggestion or motivation for combining Abe and Miike, the Examiner states that:

> [I]t would have been obvious . . . to modify the button assembly of Abe with the teachings of Miike so as to provide a button where the side walls and bottom wall are not printed circuit boards so as to avoid any contact

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[2] If instead, the Examiner proposes to insert Miike's entire switch assembly, including insulating case 11, into Abe's recess 23, then she would not obtain the claimed invention. Under that scenario, the recess would not "conform to the outer periphery of the operation control button," as required by Claim 1, but rather, would conform to the outer periphery of the insulating case 11.

between the button and circuit board, causing an unwanted change in computer function.

July 22, 2004 Office Action at 3.

Notwithstanding this assertion, the Examiner has not identified any prior art which suggests that avoiding the use of printed circuit board walls in button assembly is desirable or that it would prevent an "unwanted change in computer function." Abe uses printed circuit boards, and Miike does not suggest that its self contained button design is suitable for replacing printed circuit boards. "A rejection based on section 103 must clearly rest on a factual basis . . . . The Patent Office has the initial duty of supplying the factual basis for the rejection. . . . It may not, because *it may doubt* that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis." Application of Rice, 481 F.2d 1316, 1318 (C.C.P.A. 1973) (citations omitted) (original emphasis).

While the Examiner may have identified benefits of the present invention, she has not identified any prior art which sufficiently recognized those benefits or suggested the combination of Abe and Miike to obtain them. "The factual inquiry whether to combine references . . . must be based on objective evidence of record." In re Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). In Sang-Su Lee the Federal Circuit reversed a Board of Patent Appeals and Interferences finding of obviousness, holding that "[t]his factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority." Id. at 1343-1344. Thus, the rejection is improper on this basis as well.

Not only has the Examiner failed to properly support the combination of Abe and Miike, generally, she has also failed to identify any suggestion or motivation in the prior art for modifying the references in the manner necessary to obtain the claimed invention. "When prior art references require selective combination . . . to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself." Interconnect Planning Corp. v. Feil, 774 F.2d 1132 (Fed. Cir. 1985). Such a selective

combination would also require a reconstruction of the references which is not suggested or motivated by any prior art teaching, and is therefore, improper. See In Re Ratti, 270 F.2d 810, 813 (C.C.P.A. 1959).

As explained above, Abe and Miike cannot simply be combined to obtain the claimed invention. Extensive alteration of the references is required. Thus, to support a *prima facie* case of obviousness, the Examiner must show that the alterations are suggested by the prior art. "The mere fact that prior art could be modified in the manner proposed by the Examiner would not have made the modification obvious unless the prior art suggested the desirability of the modification." Ex parte Dussaud, 7 USPQ2d 1818, 1820 (Bd. App. & Int'f 1988) (emphasis added); see also In re Laskowski, 871 F.2d 115, 117 (Fed. Cir. 1989). The Examiner has not even proposed how Miike and Abe could be modified to obtain the claimed invention, much less identified a suggestion or motivation in the prior art for such modifications. Thus, the rejection is improper on this basis as well.

III. The Subject Matter of Claims 7 and 21 Is Not Obvious Under 35 U.S.C. § 103(a) Over Abe In View of Miike and Further in View of Seimitsu

The Examiner has rejected claims 7 and 21 as obvious over Abe in view of Miike and further in view of Seimitsu. Claims 7 and 21 depend from claims 6 and 20, respectively, and they further recite the attachment of the claimed switch in the switch mounting recess by an adhesive. The Examiner has applied the combination of Abe and Miike in the same manner described above for claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27. As such, claims 7 and 21 are allowable for the same reasons that claims 6 and 20 are allowable over the prior art of record.

The rejection is further improper because Seimitsu is non-analogous art, and its combination with Abe and Miike is not motivated or suggested by the prior art. Seimitsu is a Japanese Patent Application for which the Examiner has supplied an English-language abstract. According to the Examiner, Seimitsu "teaches using an adhesive to attach a portable clock to a

fixed base." July 22, 2004 Office Action at 4. She further asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the control switch to the switch mounting recess using an adhesive so as to provide a secure connection between the switch and recess." Id.

First, Seimitsu is non-analogous art. "In order to rely on a reference as a basis for rejection of the applicant's invention, the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In Re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992). Seimitsu concerns the use of an adhesive to fix a vibration damper to a transparent base used in the liquid crystal panel of electronic devices such as a clock and telephone. It does not address control switches or techniques for mounting or attaching them. Thus, combining Seimitsu with Abe and Miike is improper.

Second, the disclosures of Abe and Miike belie the Examiner's obviousness contention. The Examiner contends that "using an adhesive to attach one member to another is old and well known in the art . . . . " July 22, 2004 Office Action at 4 (emphasis added). However, neither Abe nor Miike suggest the desirability of using an adhesive to attach their respective switches to a switch mounting recess. If the prior art had in fact disclosed the desirability of using an adhesive to attach a control switch in a switch mounting recess, Abe and Miike would have made use of the technique as well. However, they did not, further demonstrating that the Examiner is selectively extracting individual elements of the claimed invention from the prior art, without any basis in the prior art for doing so. See In Re Laskowski, 871 F.2d 115, 117 (Fed. Cir. 1989).

IV. The Subject Matter of Claims 8 and 22 Is Not Obvious Under 35 U.S.C. § 103(a) Over Abe In View of Miike and Further in View of Miyoshi

The Examiner has rejected claims 8 and 22 as obvious based on the combination of Miike, Abe and Miyoshi and has again indicated that the combination of Abe and Miike applies in the same manner as for Claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27. The rejection is improper because the combined references do not teach all of the claim limitations and because there is no motivation or suggestion in the prior art for combining them.

A. Abe, Miike and Miyoshi Do Not Teach or Suggest the Claimed Invention

Claims 8 and 22 depend from Claims 6 and 20, respectively, and further recite a hole in the bottom surface of the switch mounting recess and an elastic attachment arm on the operation control button, wherein the attachment arm is press fitted into the hole. Thus, claims 8 and 22 are allowable for the same reasons that claims 6 and 20 are allowable over the prior art.

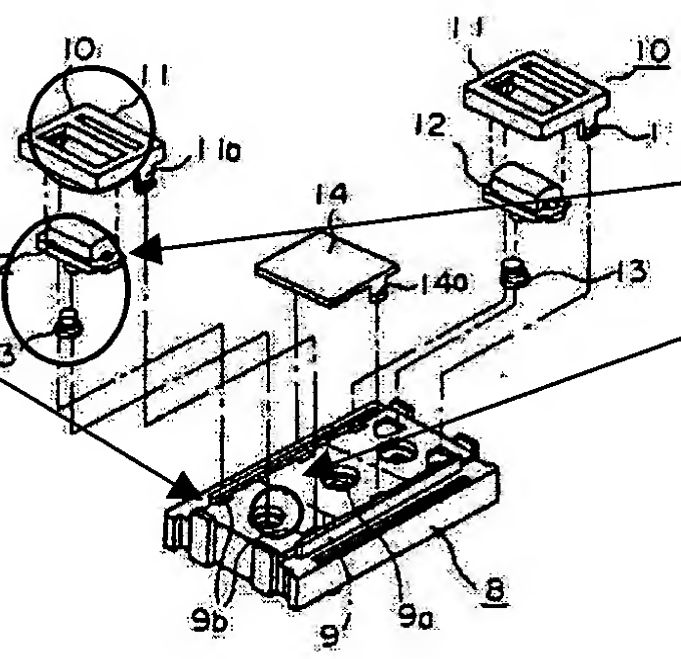
In addition, Miyoshi cannot be combined with Abe and Miike to obtain the elastic attachment arm feature recited in claims 8 and 22. Miyoshi is a Japanese Patent Application for which the Examiner has provided an English-language abstract. According to the Examiner, Miyoshi discloses a "switch mounting recess defining a hole (9a, b) therein, the control switch 12 having an attachment arm 13 made of an elastic material, wherein the attachment arm is press-fitted into the hole of the switch mounting recess." July 22, 2004 Office Action at 5. Contrary to the Examiner's assertion, Miyoshi discloses a button 12 that engages a spring 13. The spring 13 is not an "attachment arm" of the button 12, as the Examiner contends. Spring 13 appears to extend into hole 9a. However, the abstract does not describe the arrangement. Moreover, nothing in the reference indicates that spring 13 is elastic, and claims 8 and 22 recite an elastic attachment arm.

The Examiner's strategy of using hindsight to selectively pick claim elements from the prior art is clearly revealed by the assertion of Miyoshi. The Examiner indicates that holes 9a and 9b are a "switch mounting recess defining a hole." However, claims 8 and 22 require a switch mounting recess that defines a bottom wall and which comprises a bottom surface defining a hole therein. At most, Miyoshi shows a hole. It does not, however, show the claimed structure of a recess having a bottom surface defining a hole. Moreover, Miyoshi does not disclose a recess that conforms to the shape of the outer periphery of a control button, as required by the rejected claims.

Miyoshi Fig. 2

Cover 10 fits into slots 9b

第2図



Button 12 engages spring 13, which fits into hole 9a

There is no recess having a bottom wall that defines a hole

B. The Examiner Has Failed to Provide a Motivation Or Suggestion In the Prior Art For Combining Miyoshi, Abe and Miike

As with the above-described rejections, the Examiner has again failed to demonstrate that the prior art suggested the combination of Miyoshi with Abe and Miike to obtain the claimed invention. She contends that "it would have been obvious . . . so as to provide a more secure and stable form of attachment for the control device switch." July 22, 2004 Office Action at 5. However, that assertion is completely unsupported. See In re Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002); Application of Rice, 481 F.2d 1316, 1318 (Fed. Cir. 1973);

V. The Subject Matter of Claims 12 and 26 Is Not Obvious Under 35 U.S.C. § 103(a) Over Abe In View of Miike and Further in View of Hill

The Examiner has rejected claims 12 and 26 as obvious based on the combination of Miike, Abe and Hill has again indicated that the combination of Abe and Miike applies in the same manner as for Claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27. The rejection is improper because the references require modifications that are not motivated or suggested by the prior art in order to obtain the claimed invention. Moreover, Hill is non-analogous prior art, and its combination with Abe and Miike is not motivated or suggested by the prior art.

Claims 12 and 26 depend from claims 11 and 24, and are allowable for the same reasons that claims 11 and 24 are allowable over the prior art. In addition, claims 12 and 26 further recite the threaded engagement of a retention ring in the switch mounting recess. According to the Examiner, Hill "teaches a threaded retention ring used to secure a member (17) within a recess (32)." July 22, 2004 Office Action at 6. In support of her rejection, the Examiner asserts that the combination of Hill with Abe and Miike "would have been obvious . . . so as to provide a secure method of retaining the control switch within the recess that could withstand the rough conditions to which a bicycle might be exposed." Id.

First, the Examiner's combination of references is improper because it would require extensive alteration of the Miike device to obtain a threadedly engaged retention ring. According to the Examiner, Miike's frame 26 is a retention ring. See July 22, 2004 Office Action at 3. However, Miike's frame is square. Thus, it cannot be threadedly engaged in a switch mounting recess without altering its shape. As a result, the combination of the references is improper. See, In Re Ratti, 270 F.2d 810, 813 (C.C.P.A. 1959) (reversing obviousness rejection where the suggested combination of references "would require a substantial reconstruction and redesign of the elements" in the prior art).

Second, the assertion of Hill is improper because it is non-analogous prior art. Hill does not involve control switches, or structures for retaining them within recesses. Instead, it is directed to an electrostatic transducer. The portion of Hill relied upon by the Examiner concerns the threaded engagement of an O-ring retainer 16 in a transducer housing 11 to secure a sleeve 17. Thus, Hill it is non-analogous art, and its assertion against the present application is improper. See In Re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

Third, the Examiner has again failed to show a motivation or suggestion in the prior art for combining Hill with Miike and Abe. Although the Examiner identifies a benefit of threaded retention ring engagement--i.e., providing a secure method of retaining the control switch within the recess--she has not shown that this was an acknowledged goal in the prior art. She has merely provided her own unsupported contention that such was the case. See In re Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002).

VI. The Subject Matter of Claims 18 and 19 is Not Obvious Under 35 U.S.C. § 103(a) Over Abe in View of Miike and Further in View of Iteya

The Examiner has rejected claims 18 and 19 as obvious based on the combination of Abe, Miike and Iteya. Claims 18 and 19 recite a control device attached proximal to the hand grip of a handle bar such that the rider's hand can reach the control device while remaining on the handgrip. The control device defines a switch mounting recess in which a control switch is mounted. A cycle computer is attached to the handlebar separate from the control device and a connecting cable electrically connects the control switch to the computer.

First, Iteya is not prior art to the present application, and its assertion is improper. The Iteya reference identifies as its sole inventor Yoshihide Iteya, the sole inventor of the present application. The Examiner has not identified a specific provision of 35 U.S.C. § 102 under which the Iteya Patent would constitute prior art to the present application. However, because

the Iteya Patent issued on December 18, 2001, more than ten months after the present application was filed, it is not prior art under 35 U.S.C. § 102(b). Further, because the Iteya Patent and the present application were invented by the same person, the Iteya Patent is not "by another," and therefore, is not prior art under 35 U.S.C. § 102(e). See Application of Land, 368 F.2d 866, 875 (C.C.P.A. 1966) (holding that Section 102(e)'s reference to "'[a]nother' clearly means another than the 'applicants'"). Accordingly, the Iteya Patent is not prior art and should be withdrawn as a reference.

Second, Iteya does not disclose a control switch mounted in a switch mounting recess as claimed. Thus, it does not make up for the deficiencies in Abe and Miike, and the combined references fail to teach or suggest the claimed control device/switch mounting recess structure.

CONCLUSION

In view of the foregoing, it is respectfully requested that the rejection of claims 1 and 3-27 be withdrawn and that the claims be allowed.

Respectfully submitted,

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APPENDIX

1. (Previously Amended) A bicycle switch mounting assembly for holding a computer switch, comprising:

a bicycle control device having a top surface, the top surface defining a recess therein, the recess having a bottom wall and a side wall connected to the bottom wall;

an operation control button with an outer periphery having a shape, wherein the operation control button is movable within the recess, wherein the recess has a shape which conforms to the shape of the outer periphery of the operation control button, and wherein the side wall and bottom wall are not printed circuit boards.

2. Cancelled

3. (Previously Amended) A bicycle switch mounting assembly for holding a computer control switch comprising:

a bicycle shift control device having a top surface, the top surface defining a recess therein, the recess having a bottom wall and a side wall connected to the bottom wall;

an operation control button with an outer periphery having a shape, wherein the operation control button is movable within the recess, and wherein the recess is dimensioned to receive the computer control switch and has a shape conforming to the shape of the outer periphery of the operation control button, and wherein the side wall and bottom wall are not printed circuit boards.

4. (Previously Amended) A bicycle switch mounting assembly for holding a computer control switch comprising:

a bicycle brake control device having a top surface, the top surface defining a recess therein, the recess having a bottom wall and a side wall connected to the bottom wall;

an operation control button with an outer periphery having a shape, wherein the operation control button is movable within the recess, and wherein the recess is dimensioned to receive the computer control switch and has a shape conforming to the shape of the outer periphery of the operation control button, and wherein the side wall and bottom wall are not printed circuit boards.

5. (Previously Amended) A control device for holding a computer control switch comprising:

a brake control device;

a shift control device integrated with the brake control device;

a casing encompassing the brake control device and the shift control device, wherein the casing defines a recess therein, the recess having a bottom wall and a side wall connected to the bottom wall; and

an operation control button with an outer periphery having a shape, wherein the operation control button is movable within the recess, and wherein the recess is dimensioned to receive the computer control switch and has a shape conforming to the shape of the outer periphery of the operation control button, and wherein the side wall and bottom wall are not printed circuit boards.

6. (Previously Amended) A bicycle switch assembly, comprising:

a bicycle control device having a casing, the casing defining a switch mounting recess, the recess having a bottom wall and a side wall connected to the bottom wall; and

a control switch mounted in the switch mounting recess, wherein the control switch comprises an operation control button having an outer periphery having a shape, wherein

the operation control button is movable within the switch mounting recess, and the switch mounting recess has a shape conforming to the shape of the outer periphery of the operation control button, and wherein the side wall and bottom wall are not printed circuit boards.

7. (Previously Amended) The bicycle switch assembly of claim 6 wherein the control switch is attached in the switch mounting recess by an adhesive.

8. (Previously Amended) The bicycle switch assembly of claim 6 wherein the switch mounting recess comprises a bottom surface and the bottom surface defines a hole therein, the operation control button having an attachment arm made of an elastic material, wherein the attachment arm is press fitted into the hole of the switch mounting recess.

9. (Previously Amended) The bicycle switch assembly of claim 6 further comprising an elastic outer cover at least partially surrounding the control switch wherein the elastic outer cover is press fitted into the switch mounting recess.

10. (Previously Amended) The bicycle switch assembly of claim 6 further comprising a retention ring configured to restrict the movement of the control switch.

11. (Previously Amended) The bicycle switch assembly of claim 10 wherein the retention ring is fastened to the casing.

12. (Previously Amended) The bicycle switch assembly of claim 11 wherein the retention ring is threadingly engaged with the switch mounting recess.

13. (Previously Amended) A bicycle control assembly for holding a control switch for a computer, the control switch having an operation control button with an outer periphery having a shape, the bicycle control assembly comprising:

a bicycle control device having a casing defining a switch mounting recess therein, the recess having a bottom wall and a side wall connected to the bottom wall, wherein the side wall and bottom wall are not printed circuit boards;

wherein the switch mounting recess is dimensioned to receive the control switch and has a shape conforming to the shape of the outer periphery of the operation control button, and

wherein the operation control button is movable with the switch mounting recess.

14. (Original) The bicycle control assembly of claim 13 wherein the control device comprises a shift control device.

15. (Original) The bicycle control assembly of claim 13 wherein the control device comprises a brake control device.

16. (Original) The bicycle control assembly of claim 13 wherein the control device comprises a shift control device and a brake control device.

17. (Original) The bicycle control assembly of claim 13 wherein the casing defines a cable mounting recess therein, the cable mounting recess is in communication with the switch mounting recess and extending from the switch mounting recess.

18. (Previously Amended) A handlebar assembly controllable by the hand of a bicycle rider, comprising:

a handlebar having an end;

a hand grip attached to the end of the handlebar;

a bicycle control device attached to the handlebar proximal the hand grip such that the rider's hand can reach the control device while remaining on the hand grip, the bicycle control device defining a switch mounting recess therein, the recess having a bottom wall and a side wall connected to the bottom wall, wherein the side wall and bottom wall are not printed circuit boards;

a control switch mounted in the switch mounted recess of the control device, wherein the control switch comprises an operation control button having an outer periphery having a shape and the switch mounting recess has a shape conforming to the shape of the outer periphery of the operation control button, and wherein the operation control button is movable within the switch mounting recess;

a cycle computer attached to the handlebar, separate from the bicycle control device; and

a connecting cable electrically connecting the control switch to the cycle computer.

19. (Original) The handlebar assembly of claim 18, wherein the control device further defines a cable mounting recess therein in communication with the switch mounting recess, wherein the cable mounting recess extends from the switch mounting recess in the direction of the cycle computer, and wherein a portion of the connecting cable is mounted in the cable mounting recess.

20. (Previously Amended) A method of installing a control switch having an operation control button with an outer periphery having a shape, comprising the steps of:

providing a control switch and a bicycle control device having a top surface, the top surface defining a switch mounting recess therein, wherein the switch mounting recess comprises a bottom wall and a side wall connected to the bottom wall, wherein the side wall and bottom wall are not printed circuit boards, wherein the switch mounting recess is dimensioned to receive the control switch and has a shape conforming to the outer periphery of the operation control button, and wherein the operation control button is movable within the switch mounting recess; and

securing the control switch in the switch mounting recess.

21. (Original) The method of claim 20 wherein the step of securing the control switch comprises adhesively attaching the control switch to the switch mounting recess.

22. (Original) The method of claim 20 further comprising the steps of:

providing an attachment arm connected to the control switch, wherein the attachment arm comprises an elastic material;

providing a bottom surface of the switch mounting recess, wherein the bottom surface defines a hole therein; and

press fitting the elastic material into the hole in the bottom surface of the switch mounting recess.

23. (Original) The method of claim 20 further comprising the steps of:

providing an elastic outer cover surrounding the control switch; and

press fitting the elastic outer cover into the switch mounting recess.

24. (Original) The method of claim 20 further comprising the steps of:

providing a retention ring; and

attaching the retention ring to the control device in a manner that restricts the movement of the control switch.

25. (Original) The method of claim 24 wherein the step of attaching the retention ring to the control device includes fastening the retaining ring to a top surface of the control device.

26. (Original) The method of claim 24 wherein the step of attaching the retention ring to the control device includes threadingly engaging the ring with the switch mounting recess.

27. (Previously Amended) The bicycle switch assembly of claim 9 wherein the elastic outer cover is in frictional contact with and surrounded by a recess wall.